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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/994,860

Filing Date: November 28, 2001

Appellant(s): BLUM ET AL.

James E. Golladay

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10/15/2008 appealing from the Office action mailed 7/24/2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

Declaration Under Rule 132 of Neil Rondorf ("Rondorf Declaration") with enclosures

Declaration Under Rule 132 of Vickie Singleton ("Singleton Declaration")

Declaration Under Rule 132 of Isaac Ginis ("Ginis Declaration").

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 101

Claims 1-17 and 33-36 stand rejected under 35 U.S.C. 101 because the disclosed invention is wholly inoperative and therefore lacking credible utility. What has been disclosed is a concept more in the realm of speculation and conjecture rather than the reduction of an idea to a practical application based on science and technology.

Regarding claim 1, appellant claims a method of making a reduced intensity hurricane by positioning a plurality of submersibles in a hurricane interception area; maneuvering the submersibles to a predetermined depth and releasing a gas during a predetermined amount of time, the gas forming bubbles which rise in plume toward a surface to cool the surface of the ocean, thereby reducing the intensity of the hurricane. In order for an invention or process to have credible utility, the appellant's disclosure must contain sufficient evidence and reasoning to permit a person of ordinary skill in the art to believe the asserted utility. In this case, the application does not contain sufficient information to permit a person of ordinary skill in the art to believe that the process disclosed either could be implemented or could achieve the asserted useful result, since appellant has shown no evidence of reducing the speculation and conjecture to practice in either a laboratory or natural environment setting. For example, taking into consideration the enormous size of a hurricane, the process of modifying a hurricane

disclosed by appellant would take more than the resources realistically available to mankind.

On the issue of compliance with the utility requirement of 35 U.S.C. 101, the following statement made by the Supreme Court of the United States is on point:

"This is not to say that we mean to disparage the importance of contributions to the fund of scientific information short of the invention of something "useful", or that we are blind to the prospect that what now seems without "use" may tomorrow command the grateful attention of the public. But a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion. "[A] patent system must be related to the world of commerce rather than to the realm of philosophy".

See, Brenner v. Manson, 148 USPQ 689, 696 (US SupCt 1966).

Claim Rejections - 35 USC § 112

- Claims 1-17 and 33-36 stand rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected to make and/or use the invention.

Since the asserted utility is not credible for the reason set forth above, one skilled in the art would not know how to make and use the claimed invention. For example, in claim 1, the assertion that reducing the hurricane intensity by using the submersibles to

release a gas to form a plume to cool the surface of the ocean and thereby, to reduce the intensity of the hurricane, is not feasibly supported by the specification in exact terms (i.e. the grand scale or vast area of the release site, the amount of gas that is required to affect the hurricane, the number of submersibles required for the process, etc.).

Furthermore, the standard for enablement is whether a person skilled in the art would have sufficient information from the application disclosure to make and use the claimed invention without undue experimentation. In this case, the amount of experimentation necessary to perform the process disclosed would be undue. Undue experimentation would be necessary because:

- The claimed invention is broad and sweeping in scope.
- The nature of the invention is a large-scale environment change.
- The level of one ordinary skill in the art is best characterized as that of a theoretical scientist dealing in probabilities and possibilities rather than that of an engineer dealing in practical applications of technology.
- The outcome of the disclosed concept is entirely unpredictable.
- The application is devoid of working examples.
- The quantity of experimentation needed to use the invention based on the content of the disclosure can only be characterized as astronomical considering the lack of background information, past experiment, and specific detail.

(10) Response to Argument

The declarations by Isaac Ginis Ph.D., Captain Neil E. Rondorf and Vickie Lien Singleton under 37 CFR 1.132 filed 11/5/2007 are insufficient to overcome the rejection of claims 1-17 and 33-36 based upon 35 U.S.C. 101 and 35 U.S.C. 112, first paragraph as set forth in the last Office action.

In response to the appellant's argument that the three declarations filed on 11/5/2007 establish the utility and enablement of the claimed subject matter, the examiner respectfully disagrees.

It is the examiner's position that the three declarations present facts that are unconnected and do not establish utility or enablement of the claimed subject matter. It appears that the appellant is using the declaration by Isaac Ginis Ph.D., to show through numeric modeling that the reduction of the surface temperature by 2.5 degrees would reduce the intensity of a hurricane, the declaration by Captain Neil E. Rondorf to show that the technology exists to convert existing submarines into gas carrying vessels, and the declaration by Vickie Lien Singleton to show that upwelling large quantities of gas in open water will lower the surface temperature of the water. However, it is the examiner's position that none of the declarations either alone, or in combination with the other two, provide sufficient evidence to make a reduced intensity hurricane (claim 1) or reduce the intensity of a hurricane (claims 8 and 14). Given the preponderance of evidence before the examiner, it is more likely than not that the

claimed invention does not have credible utility and that one skilled in the art would require undue experimentation to make and/or use the claimed invention.

Isaac Ginis Ph.D. merely shows numerical modeling of how a reduction of sea surface temperatures by 2.5 degrees would affect a numerical model of a hurricane. It is understood that if the surface temperature of the ocean in the area that the hurricane drops 2.5 degrees the hurricane will reduce in intensity. However the claims were rejected for being inoperative and lacking credible utility as well as lacking enablement. Isaac Ginis Ph.D. does not address the rejections at hand and does not address how the claimed invention is capable of reducing the sea surface temperatures by 2.5 degrees, or if the present invention contains a disclosure sufficient to enable one of ordinary skill in the art to reduce the surface temperatures by 2.5 degrees.

Captain Neil E. Rondorf explains how the technology exists to convert existing submarines to carry gas. It is understood by the examiner that this technology exists. However, there appears to be a flaw in Captain Rondorf's reasoning on how many submersibles would be needed in order to carryout the claimed invention. Captain Rondorf asserts that the US Navy has successfully towed a naval research vessel NR-1 which has an approximately volume of 32,400 cubic feet (917 cubic meters), but bases his calculations on using a Typhoon hull which has a volume of approximately 73,000 cubic meters. It will take approximately 73 NR-1 vessels to provide the amount of gas

that one Typhoon hull can provide, therefore, the calculations presented on page 5 of the declaration are off by a factor of about 73.

Additionally, if one were to use Captain Neil E. Rondorf's calculations for the Typhoon hull; Rondorf is only calculating the number of submersibles required to provide the amount of upwelling that is mentioned in the specification, not the amount of gas required to lower the surface temperature of the ocean to be effected by a hurricane by 2.5 degrees to thereby reduce the intensity of, or form a reduced intensity hurricane. So if 1.4 million m³ of liquid CO₂ is required, Rondorf correctly calculates that only 19.17, or 20 submarines will be required, however, Rondorf does not show or explain how upwelling 1.4 million m³ of liquid CO₂ will reduce the intensity of a hurricane.

The examiner also points out that there is a discrepancy between the appellant's arguments filed on 9/15/2004 and the above mentioned declaration. The appellant stated on the record that "submersibles of the kind required for this application do not presently exist" (page 13, lines9-12), which clearly indicates that at the time of the invention, the appellants were not in possession of the technology and resources to make and or use the claimed submersibles. However, Captain Rondorf asserts that these submersibles already exist and have been in use on or before the filing of the present application. Captain Rondorf is not a named inventor in the present application, and therefore the appellant cannot rely on him as a third party to provide some of the experimentation necessary to make a workable device and method.

The Rondorf declaration does not appear to discuss how these 19 or 20 submarines bubbling up 1. 4 million m³ of liquid CO₂ will be able to replace 23 percent of

the water in a volume that is 180 km by 540 km by 70 km deep, as mentioned in the specification (page 12).

The declaration by Vickie Lien Singleton correctly calculates the number of linear and circular diffusers needed to upwell at a rate of at least 12.1 million cubic meters per second, but does not explain, show or prove how upwelling water at a rate of 12.1 million m^3/s will reduce the intensity of a hurricane. The specification and the Ginis declaration both require that the surface temperature of the ocean be reduced 2.5 degrees for the intensity of the hurricane to be reduced. Nowhere in the Singleton declaration does Ms. Singleton show that upwelling water at a rate of 12.1 million m^3/s will reduce the surface temperature of the ocean. There appears to be no fact tying the upwelling of the ocean water to a specific temperature drop in the surface of the ocean.

It is also noted that the present invention does not use the exact methods or diffusers that are being used in Ms. Singleton's calculations. The appellants even go as far as to admit, that the bubble plume methods of their invention have never been used in open-ocean, upper water column environments (specification, paragraph 28). If that is truly the case, then the calculations of Ms. Singleton cannot properly be used to model the present invention.

Lastly, it is noted that Ms. Singleton calculates that 233 linear or 236 circular diffusers would be needed to perform such upwelling. However, the declaration submitted by Captain Rondorf, discussed above, estimates that only 19 submersibles would be required to supply the proper amount of gas. That would mean that each

submersible would need to have approximately 12 diffusers connected to its outer shell. It is also noted that the size of each diffuser is approximately the surface area of each of the Typhoon submarines. How can one sub have twelve diffusers? The specification appears to only have support for each submersible having a single diffuser. Ms. Singleton also calculates that 100 million m³ of liquid CO₂ would be required to up well from the 233 diffusers at the desired rate. This is a much larger amount of CO₂ than is required by the Rondorf declaration.

So in conclusion the declarations provide specific facts to show that, if you have 20 converted Typhoon submarines you can carry 1.4 million m³ of liquid CO₂ and if you had 233 linear diffusers (12 diffusers per submarine), each diffuser being approximately the size of one Typhoon submarine, you can up well 1.4 million m³ of liquid CO₂ at a rate of 12.1 million m³/s only if you had 100 million m³ of liquid CO₂. Even if you had enough liquid CO₂, you would only be reducing the surface temperature of the ocean by an unspecified amount, not necessarily enough to reduce the intensity, or form a reduced intensity hurricane.

In reviewing the above mentioned declarations, the examiner respectfully questions the assertion that Isaac Ginis Ph.D., Captain Neil E. Rondorf and Vickie Lien Singleton, are disinterested third parties with no financial interest in the assignee due to the fact that they are each receiving \$200/hr plus reasonable expenses for his or her time spent on the declaration. If the author of the declaration is receiving monetary compensation, there appears to be a financial interest.

Finally, the signed pages at the end of the declarations are in a different font than the rest of the declarations (e.g. compare page 6 of the Rondorf declaration to pages 1-5). It is unclear if the first 5 pages were altered after the date page 6 was signed (October 24, 2007) and the date the declaration was submitted.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/J. J. B./

Examiner, Art Unit 3752

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/Len Tran/

Supervisory Patent Examiner, Art Unit 3752

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